IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of : Heng Wang and Qiliang Cai

Patent No.: US 7,981,601 B2

Issued: July 19, 2011

Application No: 10/566.697

Filed: May 10, 2006

For: METHOD OF PREPARING EPITOPES CHIMERIC GENE VACCINE

Confirmation No.: 9761

Examiner: Teresa D. Wessendorf

Art Unit: 1639
Attorney Docket No: 282-08

Electronic Filina

Attention: Certificate of Corrections Branch

Commissioner of Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Request for Certificate of Correction Under 35 U.S.C. 254 (Patent Office Errors) and 37 C.F.R. 1.323 (Applicants' Mistake)

Sir:

Applicants request that the attached Certificate of Correction (Form PTO/SB/44) be issued by the Commissioner to correct clerical errors. Some of the errors were made by the United States Patent and Trademark Office and some were made by Applicants. Applicants' errors occurred in good faith. Correction of the errors identified in the Certificate of Correction does not involve such changes in the patent as would constitute new matter or require reexamination.

The requisite fee of \$100.00 pursuant to 37 C.F.R. 120(a) is being paid by credit card.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment of fees to Paul & Paul Deposit Account No. 16-0750. The errors noted are more fully described on Form PTO/SB/44, which is attached hereto.

Respectfully submitted,

October 21, 2011

/Alex R. Sluzas/ Alex R. Sluzas, Ph.D. Registration No. 28,669 Paul & Paul Two Thousand Market Street Suite 2900 Philadelphia, PA 19103 (215) 568-4900

Order No. 9205

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number (Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 7

PATENT NO : 7.981.601 B2

APPLICATION NO.: 10/566,697 ISSUE DATE : July 19, 2011

INVENTOR(S) Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 5, line 4, reads "A. A blood smear of Plasmodium falciparfum 3D7; B. A" should read - - A. A blood smear of Plasmodium falciparum 3D7; B. A - -

Column 5, line 5, reads "blood smear of Plasmodium falciparfum FCC1; C. A blood" should read - - blood smear of Plasmodium falciparum FCC1; C. A blood - -

Column 6, line 31, reads "immunogenic in the literature on Plasmodium falciparfum" should read - - immunogenic in the literature on Plasmodium falciparum - -

Column 7, line 18, reads "In order to inhibit the growth of Plasmodium falciparfum" should read - - In order to inhibit the growth of Plasmodium falciparum - -

Column 7. line 23, reads "stages of Plasmodium falciparfum which are homologous to" should read - - stages of Plasmodium falciparum which are homologous to - -

Column 8, line 4, reads "falciparfum" should read - - falciparum - -

Column 9, line 19, reads "Chimeric Genes of Plasmodium falciparfum" should read - - Chimeric Genes of Plasmodium falcinarum - -

Column 12, lines 1-2, read "1) Recognition of Native Proteins of Plasmodium falcipar-

should read - - 1) Recognition of Native Proteins of Plasmodium parum - -

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas. Esquire, Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103-3229

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file tion by the LUSPTO in process) are application. Contributingly, a government by the LUSPTO in process) are application. Contributingly, a government by the LUSPTO in process) are application. Contributingly, a government by the LUSPTO in process are application. Contributingly, and application of the completed application from the flux SPTO. Time will very depending upon the middle case, July comments on the amount of time you require to complete find mander suggestions for reducing this burden, should be sent to the Chief Information Officer.

L.S. Patent and Trademark Office. U.S. Department of Commerce, P.O. Box 4450, Alexandrich, V.A. 2231-4460, D.O. ON SEND FEED COMPLETED. FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria. VA 22313-1450

Page 2 of 7

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMS control number. (Also Form PTO-1050

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,981,601 B2

APPLICATION NO.: 10/566,697
ISSUE DATE : July 19, 2011

INVENTOR(S) : Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 12, lines 3-4, read "a) Blood cells with erythrocytic stage Plasmodium falciparfum 3D7 (or FCC1) (with an infection rate of about 2%)"

should read - - a) Blood cells with erythrocytic stage Plasmodium falciparum 3D7 (or FCC1) (with an infection rate of about 2%) - -

Column 12, line 33, reads "native proteins of Plasmodium falciparfum in above section" should read - - native proteins of Plasmodium falciparum in above section - -

Column 12, line 38, reads "Plasmodium falciparfum by the antisera generated by the" should read - - Plasmodium falciparum by the antisera generated by the - -

Column 12, line 42, reads "from the Spanin-treated Plasmodium falcipartum. Poly-" should read - - from the Spanin-treated Plasmodium falciparum. Poly- - -

Column 12, line 50, reads "of Plasmodium falciparfum strain 3D7 was collected by cen-"
should read - - of Plasmodium falciparum strain 3D7 was collected by cen---

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas, Esquire, Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103-3229

This collection of information is required by 37 CFR 1,322, 1,323, and 1,324. The information is required to obtain or retain a benefit by the public which is to fix and by the USFD to process) an application. Confidentially is governed by 30 LS. C. 122 and 57 CFR 1.1.4. This collection is estimated by the 10 hour to complete, including gathering, preparing, and submitting the completed application form to the USFTO. Time will vary depending upon the individual case. Amy USFD and the Complete is submitted to the USFTO that will vary depending upon the individual case. Amy USFD and the USFD and th

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 3 of 7

PATENT NO. : 7,981,601 B2

APPLICATION NO.: 10/566,697 ISSUE DATE : July 19, 2011

INVENTOR(S) : Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Coversheet, FOREIGN PATENT DOCUMENTS

Foreign Patent Document reads "EP 0198328 A1 10/1986"

should read -- EP 0198328 A2 10/1986 --

Abstract, line 8, reads "tion results in the induction of high level of specific antibodies" should read - - tion results in the induction of a high level of specific antibodies - -

Column 1, line 44, reads "Ther, 3 (1), 31-36 (2001)), there is no related literature or" should read - - Ther, 3 (1), 31-36 (2001)), there are no related publications or -

Column 1, line 66, reads "therapy of allergic response and tolerance in new born infants." should read - - therapy of allergic response and tolerance in newborn infants. - -

Column 2, line 13, reads "binant vaccines. Moreover, it is problem that the synthesis of" should read - - binant vaccines. Moreover, it is a problem that the synthesis of --

Column 2, line 60, reads "vaccines are directed can not generate satisfactory protective" should read - - vaccines are directed cannot generate satisfactory protective - -

Column 3, line 35, reads "according to the results of step e) and f);"
should read - - according to the results of steps e) and f): - -

Column 3, line 42, reads "a) selecting, synthesizing and cloning Into a vector a plu-"
should read - - a) selecting, synthesizing and cloning into a vector plu- - -

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas, Esquire, Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103-32290

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the polici which is to fix quality by the UFFO to process) an application. Conditionality is governed by \$5 U.S. C. 1.22 and \$7 CFR 1.14. This collection is estimated to 1 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the summard of time yet or course to complete its borrander of use about the Summard of USPTO. The will vary depending upon the individual case. Any comments of the summard of USPTO. The Summard

U.S. Patent and Trademark Critics; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

On the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 4 of 7

PATENT NO. : 7,981,601 B2

APPLICATION NO.: 10/566,697 ISSUE DATE : July 19, 2011

INVENTOR(S) : Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 4, line 16, reads "ture of random assembled bi-epitope genes as templates (in" should read - - ture of randomly assembled bi-epitope genes as templates (in - -

Column 4, line 18, reads "respectively), and in a 50 ul system primer free polymerase" should read - - respectively), and in a 50 ul system a primer-free polymerase - -

Column 6, line 52, reads "which differ from that with cDNA expression libraries, lie in" should read - - which differ from that with cDNA expression libraries, lie in the fact -

Column 7, line 35, reads "damer sites of Bc1/I and BamHI were introduced into the" should read - - damer sites of Bc/I and BamHI were introduced into the - -

Column 7, line 39, reads "NO: 1) was introduced near the Bcll and BamHl linkage site" should read - - NO: 1) was introduced near the Bc/l and BamHl linkage site - -

Column 7, line 54, reads "BcII and BamHI and treated with equal volume of phenol," should read - - Bc/I and BamHI and treated with equal volume of phenol, - -

Column 7, line 55, reads "followed by centrifugation at 12000 rpm for 5 mm. The" should read - - followed by centrifugation at 12000 rpm for 5 min. The - -

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas, Esquire, Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103-3229

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the politic which is to fixed and by the USPTO to process an application. Confidentially is governed by 35 U.S. C. 1.22 and 57 CFR 1.1.4. This collection is estimated to 1.0 bow to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the includeal case. Any comments on the second of time you required to complete the form and/or supplections for reducing the burston, should be sent to the Children and the complete complete the complete the form and/or supplections for reducing the burston, should be sent to the Children Commission Collection.

FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Pations, P.C. Box 160, Ascandria, N. 2.2313–4350.

U.S. Patent and Trademark Officer U.S. Default and Trademark Officer U.S. Default and Trademark Officer U.S. Default Officer U.S. Default of Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

(Also Form PTO-1950)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page _ 5 _ of _ 7

PATENT NO. : 7,981,601 B2

APPLICATION NO.: 10/566,697
ISSUE DATE : July 19, 2011

INVENTOR(S) : Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 7, line 59, reads "c) The digested product was ligated to vector VR1012" should read - - c) The digested product was ligated to vector VR1 012 - -

Column 7, line 60, reads "(Vical Inc.) which had been digested with same enzymes, and" should read - - (Vical Inc.) which had been digested with the same enzymes, and - -

Column 7, line 67, reads "vector VR1012." should read - - vector VR1 012 - -

Column 8, line 11, reads "conjunction with a Hind/III site. Briefly, for the randomiza-" should read - - conjunction with a HindIII site. Briefly, for the randomiza-- -

Column 8, line 15, reads "aliquots. One was cleaved with BC/I and Hind/III the other" should read - - aliquots. One was cleaved with BC/I and HindIII, the other - -

Column 8, line 16, reads "with BamHI and Hind/III. And the fragments from the two" should read - - with BamHI and HindIII. And the fragments from the two - -

Column 8, line 64, reads "C., 3 mm 94 C., 30 sec; 50 C., 30 sec; 72 C., 30 sec; 30" should read - - C., 3 min 94 C., 30 sec; 50 C., 30 sec; 72 C., 30 sec; 30 --

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas, Esquire, Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103-3229

This collection of information is required by 37 CFR 1,322, 1,323, and 1,324. The information is required to obtain or retain a benefit by the politic valids in the 10 feet of the 10 feet of the 10 feet of 10

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 6 of 7

: 7.981,601 B2 PATENT NO

APPLICATION NO.: 10/566.697 ISSUE DATE : July 19, 2011

INVENTOR(S) : Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 9, line 1, reads "VR1012 which had been cleaved with EcoRV and BC/I, and" should read - - VR1 012 which had been cleaved with EcoRV and Bc/I, and - -

Column 9, line 28, reads "The PCR product was cleaved with bc/I and BamHI and" should read - - The PCR product was cleaved with Bc/I and BamHI and - -

Column 10, line 13, reads "the gel for at least 20 mm with horizontally shaking slowly." should read - - the gel for at least 20 min with horizontal shaking slowly - -

Column 10, line 54, reads "from OD250/OD280 measured with DU70 ultraviolet spectro-" should read - - from OD250/OD280 measured with DU70 ultraviolet spectro - -

Column 11, line 26, reads "and 100 ul of the diluted antisera with each concentration in" should read - - and 110 ul of the diluted antisera with each concentration in - -

Column 14, line 40, reads "of cytokine CD8, wherein positive polyepitope gene 5P312" should read - - of cytokine CD8, wherein positive polyepitope gene SP312 - -

Column 14, line 42, reads "5P352 or SP462. In contrast, negative polyepitope genes" should read - - SP352 or SP462. In contrast, negative polyepitope genes - -

Column 14, line 43, reads "behaved similar to empty vector, demonstrating that poly-" should read - - behaved similarly to empty vector, demonstrating that poly - -

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas. Esquire. Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia. PA 19103-3229

This collection of information is required by 37 GFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to precess) an application. Confidentiality is governed by 35 USC. 122 and 37 GFR 1.14. This collection is estimated to take 10 hour to complete, including gathering, preparing, and submitting the completed application from the but USPTO. Time will vary depending upon the individual case. Appl. comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Offsor, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEFARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

(Also Form PTO-1950)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page _ 7 _ of _ 7

PATENT NO. : 7,981,601 B2

APPLICATION NO.: 10/566,697 ISSUE DATE : July 19, 2011

INVENTOR(S) : Heng Wang and Qiliang Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 34, line 57 reads "a) selecting, synthesizing and cloning Into a vector a plu-" (Claim 10)

should read - - a) selecting, synthesizing and cloning into a vector a plu- - -

(0)-1-- 40)

Column 35, lines 21-22 reads "13. The method according to claim 1, wherein the randomly assembling of the polyepitope chimeric genes with"

(Claim 13)

should read - - 13. The method according to claim 1, wherein the random assembling of the polyepitope chimeric genes with - -

Column 36, lines 10-11 reads "16. The method according to claim 10, wherein the randomly assembling of the polyepitope chimeric genes with" (Claim 16)

should read - - 16. The method according to claim 10, wherein the random assembling of the polyepitope chimeric genes with - -

Column 36, line 12 reads "different lengths in step c) is carried out simultaneously by

should read - - different lengths in step c) is carried out simultaneously by the - -

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Alex R. Sluzas, Esquire, Paul & Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103-3229

This collection of information is required by 37 CFR 13.22, 1.323, and 1.324. The information is required to obtain or retain a bounds they the polic which is to find up the USFO to process) an application. Condinatinglish ig operands by \$5 U.S. C. 122 and \$7 CFR 1.14. This Collection is estimated to 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USFIO. Time will vary depending upon the individual case. Any comments on the summard of time you require to complete its form and/or supplection for reducing this burions, should be sent to the Child section of Collection (Collection Collection). The Collection Collection